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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

YAO, SAMCHUAN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/608,163	Applicant(s) MAGNIN ET AL.	
	Examiner Sam Chuan C. Yao	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4 and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rinchart et al (US 5,827,608). See abstract, col. 1 lines 7-10; col. 2 lines 9-43; col. 4 line 31 to col. 5 line 19; col. 6 lines 8-60; claims 1 and 10; figures 1-2 and 4.
3. Claims 1-2, 4-5, 7-8, and 10-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Akasaki et al (US 4,859,266). See abstract; col. 1 line 43 to col. 2 line 45; figures 1,3,,and 5.
4. Claims 1-2, 4-5, and 7-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sprengling (US 4,496,415). See abstract; col. 2 lines 14-57; col. 3 line 34 to col. 4 line 61; claims 1-3; figure.
5. Claims 1-2 and 4-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 03/076083 A1.
6. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Parker et al (US 5,928,721).

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Parker et al discloses a thermoplastic powder coated non-metallic fabric, wherein the thermoplastic powder is heated to melt-fuse the thermoplastic powder (abstract; col. 3 line 28 to col. 4 line 47; figure 1).

It is acknowledge that, Parker et al does not disclose electrostatically depositing thermoplastic powder onto a fabric. However, it is now well settled, *"If the product in the product by process claim is the same as or obvious from the product of the prior art, the claim is unpatentable even though the prior art product was made by a different process."* In re Thorpe, 777 f.2d 695,698,227 USPQ 964 966 (Fed. Cir. 1985). Moreover, "The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802,218 USPQ 289, 292 (Fed. Cir. 1983).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinchart et al (US 5,827,608) as applied to claim 1 above.

While Rinchart et al does not explicitly disclose adhering a finished composite comprising a non-metallic substrate and a thermoplastic layer onto another substrate, the teachings of Rinechart et al as a whole would have suggested to one in the art that the finished composite is adhered onto another substrate by heat-activating the thermoplastic layer, since Rinechart et al is directed to making a composite for use as an *"outdoor durable sign"*. In any event, it would have been obvious in the art to adhere a heat-activated thermoplastic layer of a composite having a graphic/marketing substrate layer onto a metallic or non-metallic outdoor post as such is conventional in the art.

9. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akasaki et al (US 4,859,266) as applied to claim 1 above, and optionally further in view of WO 00/05275 A1.

With respect to claim 3, a solvent activated powder adhesive comprising a polymer having cationic functionality is old in the art. In fact, such an adhesive is commercially available as evidence from Applicant's own disclosure. See for example 3, where a polymer powder having a cationic core (**ELOTEx Flex 8300**) is disclosed. Moreover and optionally, it is old in the art to form a water redispersible powder comprising a polymer having a cationic functionality where it can be used as an adhesive as exemplified in the teachings of WO '275. It would have been obvious

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in the art to replace a heat-activated thermoplastic powder with a solvent activated cationic polymeric powder for bonding a pair of fabrics in a process taught by Akasaki et al. None, but only the expected result of providing an activatable powder adhesive for bonding fabric layers would have been achieved.

With respect to claim 6, while Akasaki et al teaches applying and bonding a second fabric to a heat-activated thermoplastic powder adhesive coating on a 1st fabric (figure 5), Akasaki et al does not teach simultaneously depositing and heat-activating a thermoplastic powder adhesive. However, such would have been obvious in the art, because, absent any showing of unexpected benefit, a preference on whether to simultaneously or to sequentially deposit and activate thermoplastic powder for bonding a pair of fabrics is taken to be well within the purview of choice in the art. There is none, but only the expected result of at least softening a thermoplastic powder by heat so that the thermoplastic powder becomes tacky would have been achieved.

Response to Arguments

10. Applicant's arguments filed on 12-14-05 have been fully considered but they are not persuasive.

On page 3 full paragraph 2, Counsel argued that *"In contrast to Reinhart, the current invention relates to polymer powder adhesives, which can be activated for adhesion or cohesion ... The materials used in Rinehart (e.g. polyvinyl chloride, polymethylmethacrylate and other having a very high glass transition temperature as fluoropolymers ... are not known as functioning as adhesives and are not activatable*

for that function. In contrast, the materials used in the present invention are very different, having a glass transition temperature T_g of between -60°C and $+40^{\circ}\text{C}$ and are activatable, e.g. functioning monomers and reactive monomers, such as silanes, or having heat activatable functional groups ...". It is respectfully submitted that Counsel's argument is NOT commensurate with the scope of the recited claims. None of the presently recited claims remotely require using a polymer which has a "glass transition temperature T_g of between -60°C and $+40^{\circ}\text{C}$ and are activatable, e.g. functioning monomers and reactive monomers, such as silanes, or having heat activatable functional groups ...". Moreover, Examiner strongly disagrees with Counsel's assertion that the materials taught by Rinehart "are not known as functioning as adhesives and are not activatable for that function". As correctly noted by Counsel on page 3 full paragraph 2 lines 1-6, Rinehart teaches using "a thermoplastic powder". Thermoplastic materials are by nature tacky when heated at or above the softening temperature of the thermoplastic materials. As for Counsel's argument regarding the thermoplastic materials taught Rinehart having a very high glass transition temperature, the presently recited claims do not preclude heating the thermoplastic materials to a very high temperature to activate (i.e. soften or melt) the thermoplastic material. Equally important, Reinhart also teaches using polyethylene, polypropylene, etc. (col. 6 lines 35-43). These materials have a relatively low glass transition temperature.

On page 3 last paragraph to page 4 line 13, Counsel basically argued that "... the current invention is much more versatile than the disclosure of Akasaki and is not

directed to melting the polymer only.". Once again, Counsel's argument is not commensurate with the scope of the recited claims. Nothing in the recited claims remotely preclude activating polymeric powder by melting only. As for Counsel's argument regarding the versatility of applicant's invention, the issue here is not which is more versatile, but rather, whether or not the teachings of Akasaki anticipate the claimed invention.

As for Counsel's arguments on pages 4-5 regarding Sprengling and Maijala, Counsel's arguments are not found to be persuasive. Counsel has failed to provide any reasonable basis on why the claimed invention defines over the teachings of either Sprengling or Maijala.

On page 5 full paragraph 2, Counsel argued that "... *this reference [Parker] does not disclose electrostatically depositing thermoplastic powder onto the fabric. ... the fused powder preferentially is dispersed within voids of the fabric. ... Hence, the coating is not capable of being activated to exhibit adhesive properties. Even if it could activate, the activate the "adhesive" would be hidden in the voids, not capable of adhering to another surface.*". First of all, claim 11 does not require that the adhesive powder coated substrate should be capable of adhering to another substrate. It only requires that the powder adhesive is "*capable of being activated to exhibit adhesive properties*". Equally important, it is reasonably expected that not all of the thermoplastic powder, which is applied to a fabric is confined within voids of the fabric. Moreover, when the thermoplastic powder is melted, the melted thermoplastic powder should flow onto the surface of the fabric. Therefore, the heat-

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activated thermoplastic coated fabric is expected to be capable of adhering to another substrate.

As for Counsel's argument on page 6 full paragraph 2, at the outset, Examiner would like to apologize for an oversight in Examiner's heading in the prior office action. It should have been written as: claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Akasaki et al (US 4,859,266)** instead of Rinchart et al (US 5,827,608) as applied to claim 1 above, and optionally further in view of WO 00/05275 A1. There is, however, no change in the ground of rejection. Note that Akasaki et al patent was/is discussed instead of Rinechart et al in the body of the rejection set forth above.

As for Counsel's argument regarding Elotex Flex 8300, it is not essential in the process of Akasaki et al to form a film or coalescence to a deposited adhesive powder. What is essential in the process of Akasaki et al is to apply an adhesive powder which is effective in bonding a pair of fabrics together. The Elotex Flex 8300 is reasonably expected to be capable of effectively bonding fabrics.

On page 7, Counsel argued that, "... *it was unexpected that the fine mist of water, as describe in example 3 ... was sufficient to redisperse the material enough to obtain proper adhesion, and not to cause curling of the paper ...*". It is respectfully submitted that the alleged unexpected result is NOT commensurate with the scope of the presently recited claims.

Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richard Crispino can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

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01-11-06